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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/603,533      | 06/25/2003  | Dahv A. V. Kliner    | SD8317.2            | 4131             |

7590 06/22/2004

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EXAMINER

HOFFMANN, JOHN M

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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1731

DATE MAILED: 06/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/603,533

Applicant(s)

KLINER ET AL.

Examiner

John Hoffmann

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,5,6,8,9 and 11-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,5,6,8,9 and 11-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/10/04 has been entered.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 3, 5-6 and 8-9 and 11-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

There is no support for the limitation of the "single" refractive index. First it is noted that there is no explicit recitation of the "single" refractive index. Second, when looking at the Best Mode section: the fabrication of the rods indicates that "high-purity fused silica" tubes are used to make the glass rods (page 24, lines 17-19). If the rods

were to have exactly one refractive index, then the glass that is formed in the tubes would then have to have the same refractive index as the pure silica. This means that all of the rods would have to have the same refractive index – they could not have different refractive indices. For these reasons, there the present specification substantially teaches away from having rods of only one refractive index.

This is deemed to be a prima facie showing of failure to comply with the written description requirement. The burden is now on applicant to demonstrate that the requirement is complied with.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3, 5-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1: 4<sup>th</sup> to last line – there is no antecedent basis for “said chemical composition”.

Claim 3 has the language “at one end progresses”. It is unclear if it is supposed to be interpreted as “at one end and progresses”, or “at one end which progresses” or something else.

The claims now refer to the glass rods having a “single refractive index”. The arguments which accompanied these amended claims indicate that this new language

excludes rods that having more than one refractive index. However, claims/limitations are usually interpreted as being comprising in nature – unless it is explicitly recited they are consisting. It is unclear if the rods which have a “single refractive index” are open to having another refractive index. Furthermore, as per page 20, lines 19-27, it is indicated that composite rod having two different materials could be considered to having a single average refractive index  $n_{\text{clad}}$ . One of ordinary skill would not be able to determine what is meant by the present claim language.

Claim 9: it is unclear what is meant by “partially displacing”. Either something is in place or it is not in place. If something is “partially” displaced it is unclear whether it is still in place or it is not in place. But most importantly, Examiner cannot ascertain whether the Sink displacement inherently comprises a partial displacement prior to the complete displacement. Does one continuous displacement fail to read on claim 9, but a 1-second pause constitutes a partial displacement?

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hopkins 3395006.

Col. 1, lines 67-72 discloses the bundling and insertion of the bundle into a tube. Col. 4, line 48 discloses that the tube is glass. Col. 3, lines 39-47 disclose two refractive indices. The core refractive index is deemed to be the "single refractive index" that is either higher or lower than the predetermined target refractive index. The predetermined target refractive index is deemed to be predetermined by the method used to make the fibers. Alternatively, the claim refers to "a numerical" average – it could be a length average, an aspect ratio average, an average cladding refractive index or anything else.

Hopkins discloses the invention as claimed. However, it is unclear whether the fibers are added as a bundle to the tube, or whether the fibers are added one at a time. It would have been obvious to add the fibers as a group, because it would be quicker than adding them one at a time. The order of adding elements is generally not invention. AS to the composition of each rod being maintained in a position coincident with the glass rods: a rod has to be coincident with itself - otherwise it is in two locations at the same time. Figure 6 shows the step of heating.

Claim 3 is clearly met as per figure 6.

Claim 5: figure 4 shows a random distribution. Alternatively, it would have been obvious to load the fibers randomly, because it is easier and quicker than assigning each fiber in its own spot - since the fibers are all identical.

Claim 6: see figure 2, which shows an orderly (non-random) arrangement.

Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sink 4853020.

Sink is applied substantially the same as Hopkins. Namely, it fails to indicate whether the fibers were added as a bundle, or sequentially. And that it would have been obvious to add the fibers substantially as a bundle because it would be quicker than adding them one at a time.

The additional limitations of adding rods and replacing rods are taught at col. 3, lines 43-51. As to the refractive indices: the first rods have a single refractive index in addition to a further single refractive index.

Claim 9: it is deemed that when a Sink replacement fiber is pushing out an original fiber, that original fiber is in a "partially" displaced state and thus there is a step of partial displacement.

### ***Response to Arguments***

Applicant's arguments filed 06-10-2004 have been fully considered but they are not persuasive.

It is argued that the present claims are such that none of the fibers has a cladding layer. Examiner could find no limitation which states such.

Regarding the single refractive index, it appears that Applicant is taking the position that the claims preclude having the first glass rods being such that they have more than one refractive index. Since claims are comprising in nature, they are open to

having more than one refractive index. Furthermore, the refractive index of a material depends upon what wavelength is used to measured it. So, in fact, even a homogeneous glass rod would have one refractive index for blue light, and second refractive index for red light, etc.

Whereas it is argued that "the present invention contemplates a multiplicity of glass rods where each rod is characterized by a single refractive index", when looking at page 20, lines 19-21 indicates that a rod with a "characterized" single refractive index, the rod can still have additional refractive indices. That is, the indices of the materials of the composite.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Takuma, Cryan, Weiss, Cook, DeJong and Henderson are cited as being relevant to the disclosed invention.

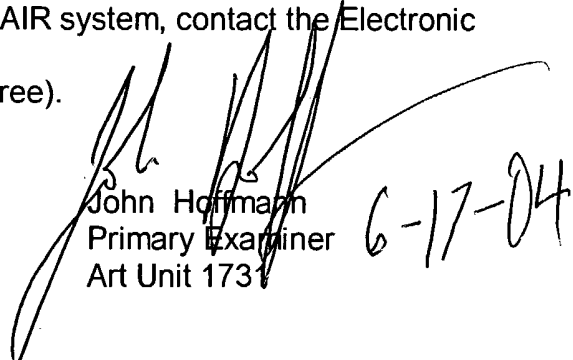
Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
John Hoffmann  
Primary Examiner  
Art Unit 1731

6-17-04

jmh